

Appl. No. 10/534,318  
Amendment and/or Response  
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Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) Circuit arrangement for operating a high pressure discharge lamp comprising

[[[-]]] input terminals for connection to a supply voltage source,

[[[-]]] a DC-DC-converter coupled to the input terminals for generating a DC

current out of a supply voltage supplied by the supply voltage source, and comprising including [[[-]]] a control loop for controlling the DC current at a value that is represented by a reference signal Sref, [[[-]]] a control circuit for adjusting the reference signal Sref, and [[[-]]] an output capacitor, and

[[[-]]] a commutator for commutating the DC current and comprising lamp connection terminals,

characterized in that ~~wherein~~ the control circuit comprises means for adjusting the reference signal Sref in dependency of the amplitude of a periodical voltage that is present across the output capacitor and is caused by the commutation of the DC current.

2. (Original) Circuit arrangement according to claim 1, wherein the control circuit comprises circuitry for generating a signal Scorr that represents the momentary amplitude of an AC voltage across the output capacitor and circuitry for subtracting the signal Scorr from the reference signal Sref.

3. (Original) Circuit arrangement according to claim 2, wherein the signal Scorr is proportional to the momentary amplitude of the AC voltage across the output capacitor.

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4. (Original) Circuit arrangement according to claim 3, wherein the circuit arrangement is equipped with circuitry for adjusting the ratio between the signal Scorr and the momentary amplitude of the AC voltage across the output capacitor in dependency of the age of the lamp.

5. (Original) Circuit arrangement according to claim 4, wherein the circuit arrangement is equipped with circuitry for adjusting the ratio between the signal Scorr and the momentary amplitude of the AC voltage across the output capacitor in dependency of the lamp voltage.

6. (Currently amended) Circuit arrangement according to claim 1, wherein the control circuit comprises

[[[-]]] a first circuit part for generating a signal Scorr that represents the peak amplitude of the overshoot voltage across the output capacitor,

[[[-]]] a second circuit part for modulating the reference signal Sref at a modulation frequency that equals the frequency of the commutation of the DC current by subsequently [[[-]]] decreasing the reference signal Sref by an amount  $\Delta Sref$  during a first time interval  $\Delta t1$  that starts a second time interval  $\Delta t2$  before each commutation of the DC current, [[[-]]] maintaining the reference signal at the decreased value during a third time interval  $\Delta t3$ , and [[[-]]] increasing the reference signal Sref by an amount  $\Delta Sref$  during a fourth time interval  $\Delta t4$ , and

[[[-]]] a third circuit part for adjusting at least one parameter chosen from the group formed by  $\Delta Sref$ ,  $\Delta t1$ ,  $\Delta t2$ ,  $\Delta t3$  and  $\Delta t4$  so that the amplitude of the signal Scorr is minimal.

7. Circuit arrangement according to claim 6, wherein the third circuit part comprises means for increasing and decreasing the value of the parameter until the amplitude of the signal Scorr is minimal.

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8. (Previously presented) Circuit arrangement according to claim 6, wherein the third circuit part comprises means for adjusting at least 2 parameters chosen from the group formed by  $\Delta S_{ref}$ ,  $\Delta t_1$ ,  $\Delta t_2$ ,  $\Delta t_3$  and  $\Delta t_4$  so that the amplitude of the signal  $S_{corr}$  is minimal.
9. (Original) Circuit arrangement according to claim 8, wherein the third circuit part comprises means for adjusting the parameters  $\Delta S_{ref}$ ,  $\Delta t_1$  and  $\Delta t_3$  so that the amplitude of the signal  $S_{corr}$  is minimal.
10. (Previously presented) Circuit arrangement according to claims 6, wherein the third circuit part comprises a microcontroller.

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